



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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Toll Free (800) 451-6027
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January 31, 2011

Gregory G. Mackley
Area Manager, Environmental Control
United States Steel Corporation, Midwest Plant
One North Broadway, MS 70-A
Gary, Indiana 46402

Dear Mr. Mackley:

Re: NPDES Permit No. IN0000337
U.S. Steel Corporation, Midwest Plant
Portage, Indiana, Porter County

Your application for a National Pollutant Discharge Elimination System (NPDES) permit for authorization to discharge into the waters of the State of Indiana has been processed in accordance with Section 402 and 405 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, et seq.), and IC 13-15, IDEM's permitting authority. All discharges from this facility shall be consistent with the terms and conditions of this permit.

One condition of your permit requires periodic reporting of several effluent parameters. These forms are available on the internet at the following web site:

<http://www.in.gov/idem/5104.htm>

Additionally, you will soon be receiving a supply of the computer generated preprinted federal NPDES DMR forms. Both the state and federal forms need to be completed and submitted on a routine basis. If you do not receive the preprinted DMR forms in a timely manner, please call this office at 317-232-8670.

Another condition which needs to be clearly understood concerns violation of the effluent limitations in the permit. Exceeding the limitations constitutes a violation of the permit and may subject the permittee to criminal or civil penalties. (See Part II A.2.) It is therefore urged that your office and treatment operator understand this part of the permit.

A response to the comments pertaining to the draft NPDES permit is contained in the Post Public Notice Addendum. The Post Public Notice Addendum is located at the end of the Fact Sheet.

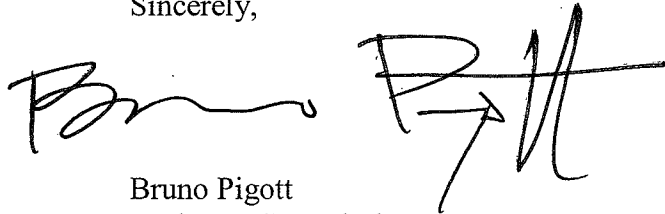
It should also be noted that any appeal must be filed under procedures outlined in IC 13-15-6, IC 4-21.5, and the enclosed Public Notice. The appeal must be initiated by filing a petition for administrative review with the Office of Environmental Adjudication (OEA) within eighteen (18) days of the mailing of this letter by filing at the following address:

Office of Environmental Adjudication
Indiana Government Center North
100 North Senate Avenue, Room 501
Indianapolis, IN 46204

Please send a copy of any written appeal to me at the IDEM, Office of Water Quality - Mail Code 65-42, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions concerning the permit, please contact Matthew Carmichael at 317/233-5961. Questions concerning appeal procedures should be directed to the Office of Environmental Adjudication, at 317/232-8591.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bruno Pigott', followed by a large, stylized flourish or checkmark.

Bruno Pigott
Assistant Commissioner
Office of Water Quality

Enclosures

cc: U.S. EPA, Region V
Porter County Health Department

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), and IDEM's authority under IC 13-15,

U.S. STEEL CORPORATION- MIDWEST PLANT

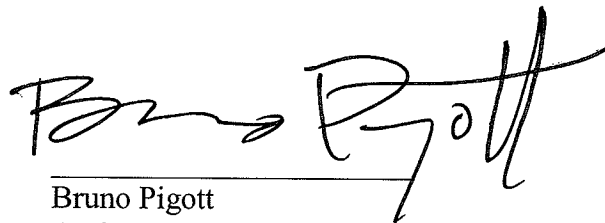
is authorized to discharge from a steel manufacturing facility that is located at 6300 U.S. Route 12 in Portage, Indiana to receiving waters named Portage-Burns Waterway in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II and III hereof. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

Effective Date: March 1, 2011

Expiration Date: February 28, 2016

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Signed on January 31, 2011 for the Indiana Department of
Environmental Management



Bruno Pigott
Assistant Commissioner
Office of Water Quality

TREATMENT FACILITY CLASSIFICATION

The discharger has a Class D industrial wastewater treatment plant, classified in accordance with 327 IAC 5-22, Classification of Wastewater Treatment Plants.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 002. The discharge is limited to non-contact cooling water and storm water runoff. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Portage-Burns Waterway. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2]

Outfall 002

Table 1

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	Weekly	24 Hour Total
Oil and Grease[6]	-----	-----	-----	-	Report	mg/l	Weekly	Grab
Total Residual Chlorine[3][4]	0.59	1.2 [5]	lbs/day	0.01	0.02	mg/l	Daily [7]	Grab

Table 2

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	Weekly	Grab

- [1] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [2] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 002; the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

- [3] The monthly average water quality based effluent limit (WQBEL) for total residual chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

The daily maximum WQBEL for total residual chlorine is greater than or equal to the LOD but less than the LOQ specified in the permit. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Chlorine	4500-Cl-D,E or 4500-Cl-G	0.02 mg/l	0.06 mg/l

Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [4] See Part I.G for Pollutant Minimization Program requirements.
- [5] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 3.5 lbs/day.
- [6] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).
- [7] Monitoring for Total Residual Chlorine shall be 1 X Daily during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

2. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 003. The discharge is limited to non-contact cooling water and storm water runoff. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Portage-Burns Waterway. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2]
Outfall 003

Table 3

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	Weekly	24 Hour Total
Oil and Grease[6]	-----	-----	-----	-	Report	mg/l	Weekly	Grab
Total Residual Chlorine[3][4]	1.6	3.1 [5]	lbs/day	0.01	0.02	mg/l	Daily [7]	Grab

Table 4

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	Weekly	Grab

- [1] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [2] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 003, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [3] The monthly average water quality based effluent limit (WQBEL) for total residual chlorine is less than the limit of quantitation (LOQ) as defined below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL.

Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted. The daily maximum WQBEL for total residual chlorine is greater than or equal to the LOD but less than the LOQ specified in the permit. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Chlorine	4500-Cl-D,E or 4500-Cl-G	0.02 mg/l	0.06 mg/l

Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [4] See Part I.G for Pollutant Minimization Program requirements.
- [5] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 9.4 lbs/day.
- [6] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).
- [7] Monitoring for Total Residual Chlorine shall be 1 X Daily during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

3. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 004. The discharge is limited to process wastewater discharge including treated chrome and Greenbelt II leachate (internal Outfalls 104 and 204), non-contact cooling water and storm water runoff. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Portage-Burns Waterway. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS[1][2]

Outfall 004

Table 5

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum			
Flow	Report	Report	MGD	-	-	-	5 X Weekly	24 Hour Total
Oil and Grease	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	Grab
Mercury[3][4]	Report	Report	lbs/day	Report	Report	ng/l	6 X Yearly	Grab
Silver [4][6][7]	0.028	0.048[8]	lbs/day	0.076	0.13	ug/l	2 X Monthly	24-Hr. Comp.
F. Cyanide [5][9]	2.7	4.8	lbs/day	0.0075	0.013	mg/l	2 X Monthly	Grab
Total Residual Chlorine[6][7]	3.7	7.3 [8]	lbs/day	0.01	0.02	mg/l	Daily [12]	Grab
Cadmium [4]	2.8	4.8	lbs/day	0.0077	0.013	mg/l	2 X Monthly	24-Hr. Comp.
Copper [4]	11	19	lbs/day	0.030	0.052	mg/l	2 X Monthly	24-Hr. Comp.
Whole Effluent Toxicity [10]	-----	-----	-----	1.5	-----	TUc	4 X Yearly [11]	24-Hr. Comp.

Table 6

Parameter	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Daily Minimum	Daily Maximum			
pH	6.0	9.0	s.u.	5 X Weekly	Grab

- [1] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [2] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 004, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

- [3] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

<u>Parameter</u>	<u>EPA Method</u>	<u>LOD</u>	<u>LOQ</u>
Mercury	1631, Revision E	0.2 ng/l	0.5 ng/l

- [4] The permittee shall measure and report the identified metal as total recoverable metal.
- [5] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Cyanide, Free	4500-CN-I	2.5 ug/l	5.0 ug/l

- [6] The monthly average water quality based effluent limit (WQBEL) for total residual chlorine and silver is less than the limit of quantitation (LOQ) as defined below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

The daily maximum WQBEL for total residual chlorine is greater than or equal to the LOD but less than the LOQ specified in the permit. The daily maximum WQBEL for silver is less than both the LOD and the LOQ specified in the permit. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Chlorine	4500-Cl-D,E or 4500-Cl-G	0.02 mg/l	0.06 mg/l
Silver	200.8	0.2 ug/l	0.64 ug/l

Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [7] See Part I.G. for Pollutant Minimization Program requirements.
- [8] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 21.9 lbs/day for Total Residual Chlorine and 0.23 lbs/day for Silver.
- [9] A reopening clause for Free Cyanide has been included in Part I. I. 5. of the permit to request a review to determine if there is no longer a reasonable potential to exceed the Water Quality Based Effluent Limits for Free Cyanide based upon the submission of more effluent data. The data is to be collected at a minimum frequency of two times per month for a minimum of ten months.

Upon demonstration to IDEM that "no Sulfides" are present at the effected internal and/or final outfalls and IDEM has reviewed and approved the demonstration, the permittee may collect samples by 24-Hr. Composite.

- [10] See Part I.F. of the permit for Whole Effluent Toxicity testing requirements.
- [11] Samples shall be taken once at any time during each of the four annual quarters:
 - (A) January-February-March;
 - (B) April-May-June;
 - (C) July-August-September; and
 - (D) October-November-December.

For quarterly monitoring, in the first quarter for example, the permittee may conduct sampling within the month of January, February or March. The result from this reporting timeframe shall be reported on the March DMR, regardless of which of the months within the quarter the sample was taken.

- [12] Monitoring for Total Residual Chlorine shall be 1 X Daily during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

4. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 104. The discharge is limited to process wastewater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with other wastestreams. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS
Outfall 104

Table 7

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	5 X Weekly	24 Hour Total
TSS	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Oil and Grease	-----	Report	lbs/day	Report	Report	mg/l	5 X Weekly	3 grabs/24 Hr.[1]
T. Chromium[2]	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Zinc [2]	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Lead [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Nickel [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Cadmium [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Copper [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Silver [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
T. Cyanide[3]	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	Grab.
Hex. Chromium[4]	Report	Report	lbs/day	Report	Report	mg/l	Weekly	Grab
Naphthalene	-----	Report	lbs/day	-----	Report	mg/l	Monthly	Grab
Tetrachloro-Ethylene	-----	Report	lbs/day	Report	Report	mg/l	Monthly	Grab
Total Toxic Organics [5]	-----	Report	lbs/day	-----	Report	mg/l	Monthly	24-Hr. Comp.
Fluoride	Report	Report	lbs/day	Report	Report	mg/l	Weekly	24-Hr. Comp.

Table 8

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	Report	Report	s.u.	5 X Weekly	Grab

- [1] A minimum of three (3) grab samples shall be collected at equally spaced time intervals for the duration of the discharge within a twenty-four (24) hour period. Each sample shall be analyzed individually, and the arithmetic mean of the concentrations reported as the value for the twenty-four (24) hour period.
- [2] The permittee shall measure and report the identified metal as total recoverable metal.

- [3] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) are prescribed in Table II or 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Cyanide	335.2 or 4500 CN-E	5 ug/l	16 ug/l

Upon demonstration to IDEM that "no Sulfides" are present at the effected internal and/or final outfalls and IDEM has reviewed and approved the demonstration, the permittee may collect samples by 24-Hr. Composite.

- [4] Hexavalent Chromium shall be measured and reported as dissolved metal. The Hexavalent Chromium sample type shall be grab method. The maximum holding time for a Hexavalent Chromium sample is 24 hours (40 CFR 136.6 Table IB). Therefore, the grab sample must be analyzed within 24 hours.
- [5] The limitation for TTO (Total Toxic Organics) applies to the summation of all quantifiable values greater than 0.01 mg/l for all toxic organics listed under 40 CFR 433.11(e) which are reasonably expected to be present. This is a federal effluent guideline based limitation and is not an authorization to discharge toxic organic compounds at levels which cause or may cause water quality violations. The discharge of organic compounds at levels which cause or may cause water quality violations is prohibited. The intent of this limitation is to assure that any solvent or other products in use at the plant, which contain any of the listed toxic organic compounds, are disposed of properly, and not dumped, spilled, discharged or leaked.

Certification Statement

In lieu of quarterly monitoring for TTO, the party responsible for signing the monthly discharge monitoring report (DMR) forms may make the following statement, as part of the DMR: "Based on my inquiry of the persons directly responsible for managing compliance with the permit limitations for TTO, I certify that, to the best of my knowledge and belief, no disposal of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the Toxic Organic Pollutant Management Plan submitted to the Compliance Evaluation Section of the Office of Water Quality, as required by this permit." The Certification Statement may not be used until completion of the Toxic Organic Pollutant Management Plan required by Part I.H of this permit.

If the above mentioned responsible party is unable to make the above Certification Statement because of discharge or spills of any TTO compounds, the Permittee is required to notify IDEM in accordance with Part II.C.3 of this permit.

5. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 204. The discharge is limited to treated chrome process wastewater and Greenbelt II Landfill leachate. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with other wastestreams. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS

Outfall 204

Table 9

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	5 X Weekly	24 Hour Total
TSS	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Oil and Grease	-----	Report	lbs/day	Report	Report	mg/l	5 X Weekly	3 grabs/24 Hr.[1]
T. Chromium[2]	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Zinc [2]	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Lead [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Nickel [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Cadmium [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Copper [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Silver [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
T. Cyanide[3]	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	Grab
Hex. Chromium[4]	Report	Report	lbs/day	Report	Report	mg/l	Weekly	Grab
Naphthalene	-----	Report	lbs/day	-----	Report	mg/l	Monthly	Grab
Tetrachloro-Ethylene	-----	Report	lbs/day	Report	Report	mg/l	Monthly	Grab
Total Toxic Organics [5]	-----	Report	lbs/day	-----	Report	mg/l	Monthly	24-Hr. Comp.
Fluoride	Report	Report	lbs/day	Report	Report	mg/l	Weekly	24-Hr. Comp.

Table 10

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	Report	Report	s.u.	5 X Weekly	Grab

- [1] A minimum of three (3) grab samples shall be collected at equally spaced time intervals for the duration of the discharge within a twenty-four (24) hour period. Each sample shall be analyzed individually, and the arithmetic mean of the concentrations reported as the value for the twenty-four (24) hour period.

- [2] The permittee shall measure and report the identified metal as total recoverable metal.
- [3] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) are prescribed in Table II or 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Cyanide	335.2 or 4500 CN-E	5 ug/l	16 ug/l

Upon demonstration to IDEM that "no Sulfides" are present at the effected internal and/or final outfalls and IDEM has reviewed and approved the demonstration, the permittee may collect samples by 24-Hr. Composite.

- [4] Hexavalent Chromium shall be measured and reported as dissolved metal. The Hexavalent Chromium sample type shall be grab method. The maximum holding time for a Hexavalent Chromium sample is 24 hours (40 CFR 136.6 Table IB). Therefore, the grab sample must be analyzed within 24 hours.
- [5] The limitation for TTO (Total Toxic Organics) applies to the summation of all quantifiable values greater than 0.01 mg/l for all toxic organics listed under 40 CFR 433.11(e) which are reasonably expected to be present. This is a federal effluent guideline based limitation and is not an authorization to discharge toxic organic compounds at levels which cause or may cause water quality violations. The discharge of organic compounds at levels which cause or may cause water quality violations is prohibited. The intent of this limitation is to assure that any solvent or other products in use at the plant, which contain any of the listed toxic organic compounds, are disposed of properly, and not dumped, spilled, discharged or leaked.

Certification Statement

In lieu of quarterly monitoring for TTO, the party responsible for signing the monthly discharge monitoring report (DMR) forms may make the following statement, as part of the DMR: "Based on my inquiry of the persons directly responsible for managing compliance with the permit limitations for TTO, I certify that, to the best of my knowledge and belief, no disposal of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the Toxic Organic Pollutant Management Plan submitted to the Compliance Evaluation Section of the Office of Water Quality, as required by this permit." The Certification Statement may not be used until completion of the Toxic Organic Pollutant Management Plan required by Part I.H of this permit.

If the above mentioned responsible party is unable to make the above Certification Statement because of discharge or spills of any TTO compounds, the Permittee is required to notify IDEM in accordance with Part II.C.3 of this permit.

6. The permittee is authorized to discharge from Outfalls 104 and 204 and report (combined total) as Outfall 304. The discharge is limited to treated process and chrome wastewaters which includes the Greenbelt II Landfill. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS[6]

Outfall 304

Table 11

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum			
Flow	Report	Report	MGD	-	-	-	5 X Weekly	24 Hour Total
TSS	1,147	2,290	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Oil and Grease	-----	765	lbs/day	Report	Report	mg/l	5 X Weekly	3 grabs/24 Hr.[1]
T. Chromium[2]	10.0	30.0	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Zinc [2]	10.0	30.0	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Lead [2]	5.90	13.73	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Nickel [2]	42.94	71.81	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Cadmium [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Copper [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
Silver [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr. Comp.
T. Cyanide[3]	3.41	7.95	lbs/day	Report	Report	mg/l	5 X Weekly	Grab
Hex. Chromium[4]	0.17	0.51	lbs/day	Report	Report	mg/l	Weekly	Grab
Naphthalene	-----	1.72	lbs/day	-----	Report	mg/l	Monthly	Grab
Tetrachloro- Ethylene	-----	2.59	lbs/day	Report	Report	mg/l	Monthly	Grab
Total Toxic Organics [5]	-----	38.43	lbs/day	-----	Report	mg/l	Monthly	24-Hr. Comp.
Fluoride	150	400	lbs/day	Report	Report	mg/l	Weekly	24-Hr. Comp.

- [1] A minimum of three (3) grab samples shall be collected at equally spaced time intervals for the duration of the discharge within a twenty-four (24) hour period. Each sample shall be analyzed individually, and the arithmetic mean of the concentrations reported as the value for the twenty-four (24) hour period.
- [2] The permittee shall measure and report the identified metal as total recoverable metal.
- [3] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) are prescribed in Table II or 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Cyanide	335.2 or 4500 CN-E	5 ug/l	16 ug/l

Upon demonstration to IDEM that "no Sulfides" are present at the effected internal and/or final outfalls and IDEM has reviewed and approved the demonstration, the permittee may collect samples by 24-Hr. Composite.

- [4] Hexavalent Chromium shall be measured and reported as dissolved metal. The Hexavalent Chromium sample type shall be grab method. The maximum holding time for a Hexavalent Chromium sample is 24 hours (40 CFR 136.6 Table IB). Therefore, the grab sample must be analyzed within 24 hours.
- [5] The limitation for TTO (Total Toxic Organics) applies to the summation of all quantifiable values greater than 0.01 mg/l for all toxic organics listed under 40 CFR 433.11(e) which are reasonably expected to be present. This is a federal effluent guideline based limitation and is not an authorization to discharge toxic organic compounds at levels which cause or may cause water quality violations. The discharge of organic compounds at levels which cause or may cause water quality violations is prohibited. The intent of this limitation is to assure that any solvent or other products in use at the plant, which contain any of the listed toxic organic compounds, are disposed of properly, and not dumped, spilled, discharged or leaked.

Certification Statement

In lieu of quarterly monitoring for TTO, the party responsible for signing the monthly discharge monitoring report (DMR) forms may make the following statement, as part of the DMR: "Based on my inquiry of the persons directly responsible for managing compliance with the permit limitations for TTO, I certify that, to the best of my knowledge and belief, no disposal of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the Toxic Organic Pollutant Management Plan submitted to the Compliance Evaluation Section of the Office of Water Quality, as required by this permit." The Certification Statement may not be used until completion of the Toxic Organic Pollutant Management Plan required by Part I.H of this permit.

If the above mentioned responsible party is unable to make the above Certification Statement because of discharge or spills of any TTO compounds, the Permittee is required to notify IDEM in accordance with Part II.C.3 of this permit.

- [6] The reported mass for each parameter shall be calculated as a sum of mass in lbs/day of both internal Outfalls 104 and 204 and reported at 304. Samples for discharges from Outfalls 104 and 204 shall be taken on the same days.

7. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfalls 001[1], 102[6], and 103[6]. The discharge is limited to storm water runoff. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with other wastestreams. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [2]

Table 12

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring	Requirements
	Monthly <u>Average</u>	Daily <u>Maximum</u>		Monthly <u>Average</u>	Daily <u>Maximum</u>		Measurement <u>Frequency</u>	Sample <u>Type</u>
Flow	Report	Report	MGD	-----	-----	-----	Quarterly [3]	24 Hour Total
TSS	-----	-----	-----	-----	Report	mg/l	Quarterly [3]	Grab [5]
COD	-----	-----	-----	-----	Report	mg/l	Quarterly [3]	Grab [5]
Oil and Grease	-----	-----	-----	-----	Report	mg/l	Quarterly [3]	Grab [5]
Ammonia	-----	-----	-----	-----	Report	mg/l	Quarterly [3]	Grab [5]
Zinc [4]	-----	-----	-----	-----	Report	mg/l	Quarterly [3]	Grab [5]
pH	-----	-----	-----	-----	Report	s.u.	Quarterly [3]	Grab [5]

- [1] See Part I.B. of the permit for the Narrative Water Quality Standards applicable to Outfall 001.
- [2] See Part I.D and Part I.E. for permit requirements related to Stormwater.
- [3] Samples shall be taken once at any time during each of the four annual quarters:
- (A) January-February-March;
 - (B) April-May-June;
 - (C) July-August-September; and
 - (D) October-November-December.

For quarterly monitoring, in the first quarter for example, the permittee may conduct sampling within the month of January, February or March. The result from this reporting timeframe shall be reported on the March DMR, regardless of which of the months within the quarter the sample was taken.

- [4] The permittee shall measure and report the identified metal as total recoverable metal.

- [5] All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event.

For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling. A grab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

- [6] IDEM included these storm water outfalls in the permit as a means for the permittee to obtain representative sampling of the storm water prior to commingling with the other discharges at Outfalls 002 and 003. The permittee has twelve months from the effective date of the permit to determine if a location for a representative storm water only measurement is possible prior to commingling into the final outfall. If an appropriate location cannot be found and with IDEM's concurrence then the internal outfall concept will be abandoned and the parameters will be measured at the corresponding final outfalls during an appropriate rain event. During this twelve (12) month determination sampling requirements at Internal Outfalls 102 and 103 are waived.

B. NARRATIVE WATER QUALITY STANDARDS

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

1. including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants:
 - a. that will settle to form putrescent or otherwise objectionable deposits;
 - b. that are in amounts sufficient to be unsightly or deleterious;
 - c. that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;
 - d. which are in amounts sufficient to be acutely toxic to , or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;
 - e. which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.

2. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the discharge.

2. Discharge Monitoring Reports

- a. For parameters with monthly average water quality based effluent limitations (WQBELs) below the LOQ, daily effluent values that are less than the limit of quantitation (LOQ) may be assigned a value of zero (0).
- b. For all other parameters for which the monthly average WQBEL is equal to or greater than the LOQ, calculations that require averaging of measurements of daily values (both concentration and mass) shall use an arithmetic mean. When a daily discharge value is below the LOQ, a value of zero (0) shall be used for that value in the calculation to determine the monthly average unless otherwise specified or approved by the Commissioner.
- c. Effluent concentrations less than the LOD shall be reported on the Discharge Monitoring Report (DMR) forms as < (less than) the value of the LOD. For example, if a substance is not detected at a concentration of 0.1 µg/l, report the value as <0.1 µg/l.
- d. Effluent concentrations greater than or equal to the LOD and less than the LOQ that are reported on a DMR shall be reported as the actual value and annotated on the DMR to indicate that the value is not quantifiable.
- e. Mass discharge values which are calculated from concentrations reported as less than the value of the limit of detection shall be reported as less than the corresponding mass discharge value.
- f. Mass discharge values that are calculated from effluent concentrations greater than the limit of detection shall be reported as the calculated value.

The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous month which shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective.

The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

3. Definitions

a. Monthly Average

- (1) Mass Basis - The "monthly average" discharge means the total mass discharge during a calendar month divided by the number of days in the month that the production or commercial facility was discharging. Where less than daily samples is required by this permit, the monthly average discharge shall be determined by the summation of the measured daily mass discharges divided by the number of days during the calendar month when the measurements were made.
- (2) Concentration Basis - The "monthly average" concentration means the arithmetic average of all daily determinations of concentration made during a calendar month. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during the calendar day.

b. "Daily Discharge"

- (1) Mass Basis - The "daily discharge" means the total mass discharge by weight during any calendar day.
- (2) Concentration Basis - The "daily discharge" means the average concentration over the calendar day or any twenty-four (24) hour period that reasonably represents the calendar day for the purposes of sampling.

c. "Daily Maximum"

- (1) Mass Basis - The "daily maximum" means the maximum daily discharge mass value for any calendar day.

- (2) Concentration Basis – The “daily maximum” means the maximum daily discharge value for any calendar day.
 - (3) Temperature Basis – The “daily maximum” means the highest temperature value measured for any calendar day.
- d. A 24-hour composite sample consists of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately equally spaced time intervals for the duration of the discharge within a 24-hour period and which are combined prior to analysis. A flow-proportioned composite sample may be obtained by:
 - (1) recording the discharge flow rate at the time each individual sample is taken,
 - (2) adding together the discharge flow rates recorded from each individual sampling time to formulate the “total flow” value,
 - (3) the discharge flow rate of each individual sampling time is divided by the total flow value to determine its percentage of the total flow value,
 - (4) then multiply the volume of the total composite sample by each individual sample’s percentage to determine the volume of that individual sample which will be included in the total composite sample.
- e. Concentration -The weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).
- f. The “Regional Administrator” is defined as the Region V Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, Illinois 60604.
- g. The “Commissioner” is defined as the Commissioner of the Indiana Department of Environmental Management, which is located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204.

- h. "Limit of Detection" or "LOD" means a measurement of the concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix. The LOD is equivalent to the method detection level or MDL.
- i. "Limit of Quantitation" or "LOQ" means a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration above the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also sometimes called limit quantification or quantification level.
- j. "Method Detection Level" or "MDL" means the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by procedure set forth in 40 CFR 136, Appendix B. The method detection level or MDL is equivalent to the LOD.

4. Test Procedures

The analytical and sampling methods used shall conform to the current version of 40 CFR 136. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for most methods, however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the Commissioner and the U.S. Environmental Protection Agency.

- a. Standard Methods for the Examination of Water and Wastewater 18th, 19th, or 20th Editions, 1992, 1995, or 1998, American Public Health Association, Washington, D.C. 20005.
- b. A.S.T.M. Standards, Parts 23, Water; Atmosphere Analysis 1972 American Society for Testing and Materials, Philadelphia, PA 19103.
- c. Methods for Chemical Analysis of Water and Wastes June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

- d. The following analytical methods and limits of detection and limits of quantitation shall be used:

Parameter [3]	Method [1]	Concentration (in ug/l)	
		LOD	(LOQ or ML)
Ammonia	SM 4500-NH3-G, EPA 350.1 (undistilled)	10	32
	SM 4500-NH3-G (w/prep SM 4500-NH3-B) (distilled)	50	160
Cadmium	200.8	0.5	1.6
Chlorine	4500-Cl-D,E or 4500-Cl-G	20	60
Copper	200.8	0.31	1.0
Fluoride	SM 4500-F-C (Ion Selective Mode)	31	100
	300.0	100	320
Lead	200.8	0.31	1.0
Mercury [2]	1631	0.0002	0.0005
Naphthalene	610 (HPLC)	0.2	0.64
Naphthalene	610 MS, EPA625	2.0	6.4
Nickel	3113B	1	3.2
	200.8	0.5	1.6
Oil & Grease	1664	2000	5000
Silver	200.8	0.2	0.64
Tetrachloroethylene	624	0.4	1.3
Hex. Chromium	218.6	0.3	0.94
Total Suspended Solids	SM 2540 D	640	2000
Zinc	3120B	3.3	10
	200.8	3.1	8.1

[1] The methods listed are the EPA Methods referenced in 40 CFR 136 or approved Standard Methods (SM).

[2] Revision E, or the most currently approved revision.

The permittee may determine a case-specific Limit of Detection (LOD) or Limit of Quantitation (LOQ) using the analytical method specified above, or any other test method which is approved by IDEM prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the IDEM.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record and maintain records of all monitoring information and monitoring activities under this permit, including the following information:

- a. The exact place, date, and time of sampling;
- b. The person(s) who performed the sampling or measurements;
- c. The dates the analyses were performed;
- d. The person(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of all required analyses and measurements.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of this monitoring shall be included in the calculation and reporting of the values required in the monthly Discharge Monitoring Report (DMR). Such increased frequency shall also be indicated. Other monitoring data not specifically required in this permit (such as internal process or internal waste stream data) which is collected by or for the permittee need not be submitted unless requested by the Commissioner.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three years shall be extended:

- a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or

- b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

D. STORM WATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

1. Control Measures and Effluent Limits

In the technology-based limits included in Part D.2-4., the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2. Control Measures

Select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part D.3 to meet the non-numeric effluent limits in Part D.4. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Any deviation from the manufacturer’s specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as expeditiously as practicable. Regulated stormwater discharges from the facility include stormwater runoff that commingles with stormwater discharges associated with industrial activity at the facility.

3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

- a. preventing stormwater from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from stormwater;
- b. use of control measures in combination is more effective than use of control measures in isolation for minimizing pollutants in stormwater discharge;
- c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;

- d. minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;
- e. flow can be attenuated by use of open vegetated swales and natural depressions;
- f. conservation and/or restoration of riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- g. use of treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

a. Minimize Exposure

Minimize the exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, pay particular attention to the following areas:

Loading and unloading areas: locate in roofed or covered areas where feasible; use grading, berming, or curbing around the loading area to divert run-on; locate the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

Material storage areas: locate indoors, or in roofed or covered areas where feasible; install berms/dikes around these areas; use dry cleanup methods.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and stowing materials in appropriate containers.

As part of the developed good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, you must implement:

- (1) Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;

- (2) Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- (3) Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your storm water pollution prevention team; and
- (4) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.
- (5) Procedures for documenting where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfalls that would be affected by such spills and leaks.
- (6) A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions to meet this limit, place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to check out information from both the State and EPA websites. The following two websites are given as information sources:

<http://www.in.gov/idem/4899.htm> and

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Waste, Garbage, and Floatable Debris

Ensure that waste, garbage, and floatable debris are not discharge to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

i. Employee Training

Train all employees who work in areas where industrial material or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team. Training must cover the specific control measures used to achieve the effluent limits in this part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit

j. Non-Stormwater Discharges

You must determine if any non-stormwater discharges not authorized by an NPDES permit exist. Any non-stormwater discharges discovered must either be eliminated or modified into this permit.

k. Dust Generation and Vehicle Tracking of Industrial Materials

You must minimize generation of dust and off-site tracking of raw, final, or waste materials.

5. Annual Review

At least once every 12 months, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limitations in this permit. You must document the results of your review in a report that shall be retained within the SWPPP. You must also submit the report to the Industrial NPDES Permit Section on an annual basis.

6. Corrective Actions – Conditions Requiring Review

- a. If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated:
 - (1) an unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this NPDES permit) occurs at this facility;
 - (2) it is determined that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
 - (3) it is determined in your routine facility inspection, an inspection by EPA or IDEM, comprehensive site evaluation, or the Annual Review required in Part D.5 that modifications to the control measures are necessary to meet the effluent limits in this permit or that your control measures are not being properly operated and maintained; or
 - (4) Upon written notice by the Commissioner that the control measures prove to be ineffective in controlling pollutants in storm water discharges exposed to industrial activity.
- b. If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit:
 - (1) construction or a change in design, operation, or maintenance at your facility that significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharge.

7. Corrective Action Deadlines

You must document your discovery of any of the conditions listed in Part I.D.6 within thirty (30) days of making such discovery. Subsequently, within one-hundred and twenty (120) days of such discovery, you must document any corrective action(s) to be taken to eliminate or further investigate the deficiency or if no corrective action is needed, the basis for that determination. Specific documentation required within 30 and 120 days is detailed below. If you determine that changes to your control measures are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but schedules considered reasonable for the documenting of your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

8. Corrective Action Report

Within 30 days of a discovery of any condition listed in Part I.D.6, you must document the following information:

- a. Brief description of the condition triggering corrective action;
- b. Date condition identified; and
- c. How deficiency identified.

Within 120 days of discovery of any condition listed in Part I.D.6, you must document the following information:

- a. Summary of corrective action taken or to be taken (or, for triggering events identified in Part I.D.6.a,3 where you determine that corrective action is not necessary, the basis for this determination)
- b. Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;
- c. Date corrective action initiated; and
- d. Date corrective action completed or expected to be completed.

9. Inspections

The inspections in this part must be conducted at this facility.

- a. At a minimum, quarterly inspections of the stormwater management measures and stormwater run-off conveyances. The routine inspections must be performed by qualified personnel with at least one member of your storm water pollution prevention team. Inspections must be documented and either contained in, or have the on-site record keeping location referenced in, the SWP3.
- b. Routine Facility Inspection Documentation – You must document the findings of each routine facility inspection performed and maintain this documentation with your SWPPP or have the on-site record keeping location referenced in the SWPPP. At a minimum, your documentation must include:
 - (1) The inspection date and time;
 - (2) The name(s) and signature(s) of the inspectors;
 - (3) Weather information and a description of any discharges occurring at the time of the inspection;
 - (4) Any previously unidentified discharges of pollutants from the site;
 - (5) Any control measures needing maintenance or repairs;
 - (6) Any failed control measures that need replacement;
 - (7) Any incidents of noncompliance observed; and
 - (8) Any additional control measures needed to comply with the permit requirements.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.D.5 of this permit.

- c. Comprehensive Site Compliance Evaluation – Qualified personnel shall conduct a comprehensive site compliance evaluation, at least once per year, to confirm the accuracy of the description of potential pollution sources contained in the plan, determine the effectiveness of the plan, and assess compliance with the permit. Such evaluations shall provide:

- (1) Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measure, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

As part of the routine inspections, address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitator, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Considering monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material loss due to wind or stormwater runoff.

- (2) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with Part I.E.2.b of this permit and pollution prevention measures and controls identified in the plan in accordance with Part I.D.4. of this permit shall be revised as appropriate within the timeframes contained in Part I.D.7 of this permit.

- (3) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with the above paragraph must be documented and either contained in, or have on-site record keeping location referenced in, the SWP3 at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with the signatory requirements of Part II.C.6 of this permit.
- (4) Where compliance evaluation schedules overlap the inspections required under Part I.E.2.c.(1)(D), the compliance evaluation may be conducted in place of one such inspection.

E. STORM WATER POLLUTION PREVENTION PLAN

1. Development of Plan

Within 12 months from the effective date of this permit, the permittee is required to revise and update the current Storm Water Pollution Prevention Plan (SWP3) for the permitted facility. The plan shall at a minimum include the following:

- a. Identify potential sources of pollution, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. Storm water associated with industrial activity (defined in 40 CFR 122.26(b)) includes, but is not limited to, the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or materials storage areas at an industrial plant;
- b. Describe practices and measure to be used in reducing the potential for pollutants to be exposed to storm water; and
- c. Assure compliance with the terms and conditions of this permit.

2. Contents

The plan shall include, at a minimum, the following items:

- a. Pollution Prevention Team -The plan shall list, by position title, the member or members of the facility organization as members of a storm water Pollution Prevention Team who are responsible for developing the storm water pollution prevention plan (SWP3) and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each storm water pollution prevention team member. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit and your SWPPP.
- b. Description of Potential Pollutant Sources – The plan shall provide a description of areas at the site exposed to industrial activity and have a reasonable potential for storm water to be exposed to pollutants. The plan shall identify all activities and significant materials (defined in 40 CFR 122.26(b)), which may potentially be significant pollutant sources. As a minimum, the plan shall contain the following:
 - (1) A soils map indicating the types of soils found on the facility property and showing the boundaries of the facility property.
 - (2) A graphical representation, such as an aerial photograph or site layout maps, drawn to an appropriate scale, which contains a legend and compass coordinates, indicating, at a minimum, the following:
 - (A) All on-site storm water drainage and discharge conveyances, which may include pipes, ditches, swales, and erosion channels, related to a storm water discharge.
 - (B) Known adjacent property drainage and discharge conveyances, if directly associated with run-off from the facility.
 - (C) All on-site and known adjacent property water bodies, including wetlands and springs.

- (D) An outline of the drainage area for each outfall.
- (E) An outline of the facility property, indicating directional flows, via arrows, of surface drainage patterns.
- (F) An outline of impervious surfaces, which includes pavement and buildings, and an estimate of the impervious and pervious surface square footage for each drainage area placed in a map legend.
- (G) On-site injection wells, as applicable.
- (H) On-site wells used as potable water sources, as applicable.
- (I) All existing major structural control measures to reduce pollutants in storm water run-off.
- (J) All existing and historical underground or aboveground storage tank locations, as applicable.
- (K) All permanently designated plowed or dumped snow storage locations.
- (L) All loading and unloading areas for solid and liquid bulk materials.
- (M) All existing and historical outdoor storage areas for raw materials, intermediary products, final products, and waste materials. Include materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities.
- (N) All existing or historical outdoor storage areas for fuels, processing equipment, and other containerized materials, for example, in drums and totes.
- (O) Outdoor processing areas.
- (P) Dust or particulate generating process areas.
- (Q) Outdoor assigned waste storage or disposal areas.

- (R) Pesticide or herbicide application areas.
- (S) Vehicular access roads.
- (T) Identify any storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operation, etc., and could result in a discharge of pollutants.

The mapping of historical locations is only required if the historical locations have a reasonable potential for stormwater exposure to historical pollutants.

- (3) An area site map that indicates:
 - (A) The topographic relief or similar elevations to determine surface drainage patterns;
 - (B) The facility boundaries;
 - (C) All receiving waters; and
 - (D) All known drinking water wells; and

Includes at a minimum, the features in clauses (A), (C), and (D) within a one-fourth (1/4) mile radius beyond the property boundaries of the facility. This map must be to scale and include a legend and compass coordinates.

- (4) A narrative description of areas that generate stormwater discharges exposed to industrial activity including descriptions for any existing or historical areas listed in subdivision 2.b.(2)(J) through (S) of this Part, and any other areas thought to generate storm water discharges exposed to industrial activity. The narrative descriptions for each identified area must include the following:

- (A) Type and typical quantity of materials present in the area.
- (B) Methods of storage, including presence of any secondary containment measures.
- (C) Any remedial actions undertaken in the area to eliminate pollutant sources or exposure of storm water to those sources. If a corrective action plan was developed, the type of remedial action and plan date shall be referenced.
- (D) Any significant release or spill history dating back a period of three (3) years from the effective date of this permit, in the identified area, for materials spilled outside of secondary containment structures and impervious surfaces in excess of their reportable quantity, including the following:
 - i. The date and type of material released or spilled.
 - ii. The estimated volume released or spilled.
 - iii. A description of the remedial actions undertaken, including disposal or treatment.

Depending on the adequacy or completeness of the remedial actions, the spill history shall be used to determine additional pollutant sources that may be exposed to storm water. In subsequent permit terms, the history shall date back for a period of five (5) years from the date of the permit renewal application.

- (E) Where the chemicals or materials have the potential to be exposed to storm water discharges, the descriptions for each identified area must include a risk identification analysis of chemicals or materials stored or used within the area. The analysis must include the following:
 - i. Toxicity data of chemicals or materials used within the area, referencing appropriate material safety data sheet information

locations.

- ii. The frequency and typical quantity of listed chemicals or materials to be stored within the area.
 - iii. Potential ways in which storm water discharges may be exposed to listed chemicals and materials.
 - iv. The likelihood of the listed chemicals and materials to come into contact with water.
- (5) A narrative description of existing and planned management practices and measures to improve the quality of storm water run-off entering a water of the state. Descriptions must be created for existing or historical areas listed in subdivision 2.b.(2)(J) through (S) and any other areas thought to generate storm water discharges exposed to industrial activity. The description must include the following:
- (A) Any existing or planned structural and nonstructural control practices and measures.
 - (B) Any treatment the storm water receives prior to leaving the facility property or entering a water of the state.
 - (C) The ultimate disposal of any solid or fluid wastes collected in structural control measures other than by discharge.
 - (D) Describe areas that due to topography, activities, or other factors have a high potential for significant soil erosion.
 - (E) Document the location of any storage piles containing salt used for deicing.
 - (F) Information or other documentation required under subsection (d) of this plan.
- (6) The results of stormwater monitoring. The monitoring data must include completed field data sheets, chain-of-custody forms, and laboratory results. If the monitoring data are not

placed into the facility's SWP3, the on-site location for storage of the information must be reference in the SWP3.

- c. Non-Stormwater Discharges – You must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES. Any non-storm water discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include
- (1) A written non-storm water assessment, including the following:
 - (A) A certification letter stating that storm water discharges entering a water of the state have been evaluated for the presence of illicit discharges and non-storm water contributions.
 - (B) Detergent or solvent-based washing of equipment or vehicles that would allow washwater additives to enter any storm water only drainage system shall not be allowed at this facility unless appropriately permitted under this NPDES permit.
 - (C) All interior maintenance area floor drains with the potential for maintenance fluids or other materials to enter storm water only storm sewers must be either sealed, connected to a sanitary sewer with prior authorization, or appropriately permitted under this NPDES permit. The sealing, sanitary sewer connecting, or permitting of drains under this item must be documented in the written non-storm water assessment program.
 - (D) The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during the test.
- d. General Requirements – The SWP3 must meet the following general requirements:
- (1) The plan shall be certified by a qualified professional. The term qualified professional means an individual who is trained and experienced in water treatment techniques and related fields as may be demonstrated by state registration, professional certification, or completion of course work

that enable the individual to make sound, professional judgments regarding storm water control/treatment and monitoring, pollutant fate and transport, and drainage planning.

- (2) The plan shall be retained at the facility and be available for review by a representative of the Commissioner upon request. IDEM may provide access to portions of your SWP3 to the public.
- (3) The plan must be revised and updated as required. Revised and updated versions of the plan must be implemented on or before three hundred sixty-five (365) days from the effective date of this permit. The Commissioner may grant an extension of this time frame based on a request by the person showing reasonable cause.
- (4) If the permittee has other written plans, required under applicable federal or state law, such as operation and maintenance, spill prevention control and countermeasures (SPCC), or risk contingency plans, which fulfill certain requirements of an SWP3, these plans may be referenced, at the permittee's discretion, in the appropriate sections of the SWP3 to meet those section requirements.
- (5) The permittee may combine the requirements of the SWP3 with another written plan if:
 - (A) The plan is retained at the facility and available for review;
 - (B) All the requirements of the SWP3 are contained within the plan; and
 - (C) A separate, labeled section is utilized in the plan for the SWP3 requirements.

F. WHOLE EFFLUENT TOXICITY LIMITATIONS

The 1977 Clean Water Act explicitly states, in Section 101(3) that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. In support of this policy the U.S. EPA in 1995 amended 40 CFR 136.3 (Tables IA and II) by adding testing method for measuring acute and short-term chronic toxicity of whole effluents and receiving waters. To adequately assess the character of the effluent, and the effects of the effluent on aquatic life, the permittee shall conduct Whole Effluent Toxicity Testing. Part 1 of this

section describes the testing procedures, Part 2 describes the Toxicity Reduction Evaluation which is only required if the effluent demonstrated toxicity, as described in paragraph 1.f.

1. Whole Effluent Toxicity Tests

The permittee shall continue with their current schedule of the series of bioassay tests described below to monitor the toxicity of the discharge from Outfall 004. If toxicity is demonstrated as defined under paragraph f. below, the permittee is required to conduct a toxicity reduction evaluation (TRE).

a. Bioassay Test Procedures and Data Analysis

- (1) All test organisms, test procedures and quality assurance criteria used shall be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms; Fourth Edition Section 13, Cladoceran (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0; and Section 11, Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test Method, (1000.0) EPA 821-R-02-013, October 2002, or most recent update.
- (2) Any circumstances not covered by the above methods, or that required deviation from the specified methods shall first be approved by the IDEM's Environmental Toxicology and Chemistry Section.
- (3) The determination of effluent toxicity shall be made in accordance with the Data Analysis general procedures for chronic toxicity endpoints as outlined in Section 9, and in Sections 11 and 13 of the respective Test Method (1000.0 and 1002.0) of Short-term Methods of Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms (EPA-821-R-02-013), Fourth Edition, October 2002, or most recent update.

b. Types of Bioassay Tests

The permittee shall conduct 7-day Daphnid (*Ceriodaphnia dubia*) Survival and Reproduction Test and a 7-day Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test on samples of final effluent. All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. On days three and

five fresh 24-hour composite samples of the effluent collected on alternate days shall be used to renew the test solutions.

If, in any control, more than 10% of the test organisms die in 96 hours, or more than 20% of the test organisms die in 7 days, that test shall be repeated. In addition, if in the *Ceriodaphnia* test control the number of newborns produced per surviving female is less than 15, or if 60% of surviving control females have less than three broods; and in the fathead minnow test if the mean dry weight of 7-day old surviving fish in the control group is less than 0.25 mg, that test shall also be repeated. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test organisms. Results of all tests regardless of completion must be reported to IDEM.

c. Effluent Sample Collection and Chemical Analysis

- (1) Samples taken for the purposes of Whole Effluent Toxicity Testing will be taken at a point that is representative of the discharge, but prior to discharge. The maximum holding time for whole effluent is 36 hours for a 24 hour composite sample. Bioassay tests must be started within 36 hours after termination of the 24 hour composite sample collection. Bioassay of effluent sampling may be coordinated with other permit sampling requirements as appropriate to avoid duplication.
- (2) Chemical analysis must accompany each effluent sample taken for bioassay test, especially the sample taken for the repeat or confirmation test as outlined in paragraph f.3. below. The effluent sample should be analyzed for all parameters detailed under Part I.A. for Outfall 004, except for Mercury via Method 1631E. Chemical analysis must comply with approved EPA test methods.

d. Testing Frequency and Duration

The chronic toxicity test specified in paragraph b. above shall be conducted quarterly for the duration of the permit. After three tests have been completed, that indicate no toxicity as defined in paragraph f. below, the permittee may reduce the number of species tested to only include the most sensitive to the toxicity in the effluent. In the absence of toxicity with either species in the monthly testing for three (3) months in the current tests, sensitive

species will be selected based on frequency and failure of whole effluent toxicity tests with one or the other species in the immediate past.

If toxicity is demonstrated as defined under paragraph f., the permittee is required to conduct a toxicity reduction evaluation (TRE) as specified in Section 2.

e. Reporting

- (1) Results shall be reported according to EPA 821-R-02-013, October 2002, Section 10 (Report Preparation). Two copies of the completed report for each test shall be submitted to the Data Management and Compliance Evaluation Section, Office of Water Quality of the IDEM no later than sixty days after completion of the test.
- (2) For quality control, the report shall include the results of appropriate standard reference toxic pollutant tests for chronic endpoints and historical reference toxic pollutant data with mean values and appropriate ranges for the respective test species *Ceriodaphnia dubia* and *Pimephales promelas*. Biomonitoring reports must also include copies of Chain-of-Custody Records and Laboratory raw data sheets.
- (3) Statistical procedures used to analyze and interpret toxicity data including critical values of significance to evaluate each point of toxicity should be described and included as part of the biomonitoring report.

f. Demonstration of Toxicity

- (1) Acute toxicity will be demonstrated if the effluent is observed to have exceeded 1.0 TU_a (acute toxic units) based on 100% effluent for the test organism in 48 and 96 hours for *Ceriodaphnia dubia* or *Pimephales promelas*, respectively.
- (2) Chronic toxicity will be demonstrated if the effluent is observed to have exceeded 1.5 TU_c (chronic toxic units) for *Ceriodaphnia dubia* or *Pimephales promelas*.
- (3) If toxicity is found in any of the tests as specified above, a confirmation toxicity test using the specified methodology and same test species shall be conducted within two weeks

of the completion of the failed test to confirm results. During the sampling for any confirmation test the permittee shall also collect and preserve sufficient effluent samples for use in and Toxicity Identification Evaluation (TIE) and/or Toxicity Reduction Evaluation (TRE), if necessary. If any two (2) consecutive tests, including any and all confirmation tests, indicate the presence of toxicity, the permittee must begin the implementation of a Toxicity Reduction Evaluation (TRE) as described below. The whole effluent toxicity tests required above may be suspended (upon approval from IDEM) while the TRE is being conducted.

g. Definitions

- (1) TU_c is defined as $100/NOEC$ or $100/IC_{25}$, where the $NOEC$ or IC_{25} are expressed as a percent effluent in the test medium.
- (2) TU_a is defined as $100/LC_{50}$ where the LC_{50} is expressed as a percent effluent in the test medium of an acute whole effluent toxicity (WET) test that is statistically or graphically estimated to be lethal to fifty percent (50%) of the test organisms.
- (3) "Inhibition concentration 25" or " IC_{25} " means the toxicant (effluent) concentration that would cause a twenty-five percent (25%) reduction in a nonquantal biological measurement for the test population. For example, the IC_{25} is the concentration of toxicant (effluent) that would cause a twenty-five percent (25%) reduction in mean young per female or in growth for the test population.
- (4) "No observed effect concentration" or " $NOEC$ " is the highest concentration of toxicant (effluent) to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms, that is, the highest concentration of toxicant (effluent) in which the values for the observed responses are not statistically significantly different from the controls.
- (5) "Quarterly" defined for the purposes of taking samples during a given quarter will be defined as in the months of March, June, September, and December.

2. Toxicity Reduction Evaluation (TRE) Schedule of Compliance

The development and implementation of a TRE (including any post-TRE biomonitoring requirements) is only required if toxicity is demonstrated as defined in section 1.f. above.

a. Development of TRE Plan

Within 90 days of determination of toxicity, the permittee shall submit plans for an effluent toxicity reduction evaluation (TRE) to the Compliance Data Section, Office of Water Quality of the IDEM. The TRE plan shall include appropriate measures to characterize the causative toxicants and the variability associated with these compounds. Guidance on conducting effluent toxicity reduction evaluations is available from EPA and from the EPA publications list below:

(1) Methods for Aquatic Toxicity Identification Evaluations:

Phase I Toxicity Characteristics Procedures, Second Edition (EPA/600/6-91/003, February 1991.

Phase II Toxicity Identification Procedures (EPA 600/R-92/080), September 1993.

Phase III Toxicity Confirmation Procedures (EPA 600/R-92/081), September 1993.

(2) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I. EPA/600/6-91/005F, May 1992.

(3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), (EPA/600/2-88/070), April 1989.

(4) Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatments Plants (EPA/833-B-99-022) August 1999.

b. Conduct the Plan

Within 30 days after the submission of the TRE plan to IDEM, the permittee must initiate an effluent TRE consistent with the TRE plan. Progress reports shall be submitted every 90 days to the Compliance Data Section, Office of Water Quality of the IDEM beginning 90 days after initiation of the TRE study.

c. Reporting

Within 90 days of the TRE study completion, the permittee shall submit to the Compliance Data Section, Office of Water Quality of the IDEM, the final study results and a schedule for reducing the toxicity to acceptable levels through control of the toxicant source or treatment of whole effluent.

d. Compliance Date

The permittee shall complete items a, b, and c from Section 2 above and reduce the toxicity to acceptable levels as soon as possible, but no later than three years after the date of determination of toxicity.

e. Post-TRE Biomonitoring Requirements (Only Required After Completion of a TRE)

After the TRE, the permittee shall conduct monthly toxicity tests with 2 or more species for a period of three months. Should three consecutive monthly tests demonstrate no toxicity, the permittee may reduce the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent (see section F.1.d., for more specifics on the topic), and conduct chronic tests quarterly for the duration of the permit.

If toxicity is demonstrated, as defined in paragraph 1.f. above, after the initial three month period, testing must revert to a TRE as described in Part 2 (TRE). These tests shall be conducted in accordance with the procedures under the Whole Effluent Toxicity Testing Section above.

G. POLLUTION MINIMIZATION PROGRAM

If this permit contains water quality-based effluent limits for total residual chlorine and silver, the permittee is required to develop and conduct a pollutant minimization program (PMP) for each pollutant with a WQBEL below the LOQ. One PMP can be submitted for all affected outfalls for total residual chlorine.

- a. The goal of the pollutant minimization program shall be to maintain the effluent at or below the WQBEL. The pollutant minimization program shall include, but is not limited to, the following:
 - (1) Submit a control strategy designed to proceed toward the goal within 180 days of the effective date of this permit.
 - (2) Implementation of appropriate cost-effective control measures, consistent with the control strategy within 365 days of the effective date of this permit.
 - (3) Monitor as necessary to record the progress toward the goal. Potential sources of the pollutant shall be monitored on a semi-annual basis. Quarterly monitoring of the influent of the wastewater treatment system is also required. The permittee may request a reduction in this monitoring requirement after four quarters of monitoring data.
 - (4) Submit an annual status to the Commissioner at the address listed in Part I.C.3.g. to the attention of the Office of Water Quality, Compliance Data Section, by January 31 of each year that includes the following information:
 - (i) All minimization program monitoring results for the previous year.
 - (ii) A list of potential sources of the pollutant.
 - (iii) A summary of all actions taken to reduce or eliminate the identified sources of the pollutant.
 - (5) A pollution minimization program may include the submittal of pollution prevention strategies that use changes in production process technology, materials, processes, operations, or procedures to reduce or eliminate the source of the pollutant.
- b. No pollution minimization program is required if the permittee demonstrates that the discharge of a pollutant with a WQBEL below the LOQ is reasonably expected to be in compliance with the WQBEL at the

point of discharge into the receiving water. This demonstration may include, but is not limited to, the following:

- (1) Treatment information, including information derived from modeling the destruction or removal of the pollutant in the treatment process.
 - (2) Mass balance information.
 - (3) Fish tissue studies or other biological studies.
- c. In determining appropriate cost-effective control measures to be implemented in a pollution minimization program, the following factors may be considered:
- (1) Significance of sources.
 - (2) Economic and technical feasibility.
 - (3) Treatability.

H. TOXIC ORGANIC POLLUTANT MANAGEMENT PLAN

In order to use the Certification Statement for Total Toxic Organics in Part I.A.4., I.A.5, and I.A.6, footnote [5] of this permit, the Permittee is required to submit a management plan for toxic organic pollutants. The Toxic Organic Pollutant Management Plan is to be submitted to the Compliance Data Section of the Office of Water Quality within ninety (90) days of the effective date of this permit, and is to include a listing of toxic organic compounds used, the method of disposal, and procedure for ensuring that these compounds do not routinely spill or leak into the process wastewater, noncontact cooling water, groundwater, stormwater, or other surface waters.

I. REOPENING CLAUSES

This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing:

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:
 - a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

- b. controls any pollutant not limited in the permit.
 2. to incorporate any of the reopening clause provisions cited at 327 IAC 5-2-16.
 3. to include a case-specific Limit of Detection (LOD) and/or Limit of Quantitation (LOQ). The permittee must demonstrate that such action is warranted in accordance with the procedures specified under Appendix B, 40 CFR Part 136, using the most sensitive analytical methods approved by EPA under 40 CFR Part 136, or approved by the Commissioner.
 4. to revise or remove the requirements of the pollutant minimization program, if supported by information generated as a result of the program.
 5. request a review to determine if there is no longer a reasonable potential to exceed the Water Quality Based Effluent Limits for Free Cyanide based upon the submission of more effluent data. The data is to be collected at a minimum frequency of two times per month and for a duration of ten months.
 6. to allow review for a proposed thermal model whereby the permit may be reopened to include such a provision for compliance. Any new model must limit the mixing zone to one-half the width of Portage-Burns Waterway and account for: upstream flow and temperature; effluent flow and temperature; and, the combined effect of the discharges from Outfalls 002, 003 and 004 on the temperature at the edge of the mixing zone.
- J. REPORTING REQUIREMENTS FOR SOLVENTS, DEGREASING AGENTS, ROLLING OILS, WATER TREATMENT CHEMICALS AND BIOCIDES

Annually, US Steel Midwest Plant will report as part of the fourth monthly Discharge Monitoring Report of the following year, the total quantity (lbs/yr) of each solvent, degreasing agent, water treatment chemical, rolling oil and biocide that was purchased for that year and which can be present in any outfall regulated by this permit. This reporting requirement includes all surfactants, anionic, cationic and non-ionic, which may be used in part or wholly as a constituent in these compounds.

US Steel Midwest Plant will maintain these files for a period of ten years. Files will include the Material Safety Data Sheet, FIFRA Label for each biocide, chemical name and CAS Number for each compound used. If these compounds contain proprietary material, US Steel Midwest Plant may maintain this information in a separate file that can be accessed by U.S. EPA or IDEM personnel with appropriate authority.

PART II

STANDARD CONDITIONS FOR NPDES PERMITS

A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit an application for renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. Pursuant to 327 IAC 5-3-2(a)(2), the application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

- a. permission is requested in writing before such deadline;
- b. IDEM grants permission to submit the application after the deadline; and
- c. the application is received no later than the permit expiration date.

4. Permit Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

- a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date.
- b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner.
- c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility.
- d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

5. Permit Actions

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;

- b. Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or
- c. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit, e.g., plant closure, termination of discharge by connection to a POTW, a change in state law that requires the reduction or elimination of the discharge, or information indicating that the permitted discharge poses a substantial threat to human health or welfare.

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

- 1. could significantly change the nature of, or increase the quantity of pollutants discharged; or
- 2. the commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

6. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or invasion of other private rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

7. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

10. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Water Pollution Control Board is liable for a civil penalty not to exceed twenty-five thousand dollars (\$25,000) per day of any violation.

Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation performed under IC 13-14-2-2 commits a class C infraction.

Pursuant to IC 13-30-10-1.5(k), a person who willfully or recklessly violates any NPDES permit condition or filing requirement, any applicable standards or limitations of IC 13-18-3-2.4, IC 13-18-4-5, IC 13-18-8, IC 13-18-9, IC 13-18-10, IC 13-18-12, IC 13-18-14, IC 13-18-15, or IC 13-18-16, or who knowingly makes any false material statement, representation, or certification in any NPDES form, notice, or report commits a Class C misdemeanor.

An offense under IC 13-30-10-1.5(k) is a Class D felony if the offense results in damage to the environment that renders the environment unfit for human or vertebrate animal life. An offense under IC 13-30-10-1.5(k) is a Class C felony if the offense results in the death of another person.

11. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(9), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10, provides that any person who knowingly or intentionally (a) destroys, alters, conceals, or falsely certifies a record that is required to be maintained under the terms of a permit issued by the department; and may be used to determine the status of compliance, (b) renders inaccurate or

inoperative a recording device or a monitoring device required to be maintained by a permit issued by the department, or (c) falsifies testing or monitoring data required by a permit issued by the department commits a Class B misdemeanor.

12. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

13. Wastewater treatment plant and certified operators

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7.

327 IAC 5-22-10(b) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(10), "responsible charge" means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(a), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

14. Construction Permit

In accordance with IC 13-14-8-11.6, a discharger is not required to obtain a state permit for the modification or construction of a water pollution treatment or control facility if the discharger has an effective NPDES permit.

If the discharger modifies their existing water pollution treatment or control facility or constructs a new water pollution treatment or control facility for the treatment or control of any new influent pollutant or increased levels of any existing pollutant, then, within thirty (30) days after commencement of operation, the discharger shall file with the Department of Environment Management a notice of installation for the additional pollutant control equipment and a design summary of any modifications.

The notice and design summary shall be sent to the Office of Water Quality - Mail Code 65-42, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, IN 46204-2251.

15. Inspection and Entry

In accordance with 327 IAC 5-2-8(7), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and
- d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

16. New or Increased Discharge of Pollutants

This permit prohibits the permittee from undertaking any action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a pollutant parameter that is not a BCC unless one of the following is completed prior to the commencement of the action:

- a. Information is submitted to the Commissioner demonstrating that the proposed new or increased discharges will not cause a significant lowering of water quality as defined under 327 IAC 5-

2-11.3(b)(1). Upon review of this information, the Commissioner may request additional information or may determine that the proposed increase is a significant lowering of water quality and require the submittal of an antidegradation demonstration.

- b. An antidegradation demonstration is submitted to and approved by the Commissioner in accordance with 327 IAC 5-2-11.3(b)(3) through (6).

B. MANAGEMENT REQUIREMENTS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for the collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit in accordance with 327 IAC 5-2-8(8).

Neither 327 IAC 5-2-8(8), nor this provision, shall be construed to required the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(11):

- a. Terms as defined in 327 IAC 5-2-8(11)(A):
 - (1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.
 - (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- b. The permittee may allow a bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.c., e, and f of this permit.

- c. Bypasses, as defined in (a) above, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless the following occur:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined above;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Part II.B.2.e; or
 - (4) The condition under Part II.B.2.b above is met.
- d. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the "Spill Response and Reporting Requirements" in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery.
- e. The permittee must provide the Commissioner with the following notice:
 - (1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.
 - (2) The permittee shall orally report an unanticipated bypass that exceeds any effluent limitations in the permit within 24 hours of becoming aware of the bypass noncompliance. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the

anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the bypass event.

- f. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.c. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

3. Upset Conditions

Pursuant to 327 IAC 5-2-8(12):

- a. “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this section, are met.
- c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:
 - (1) An upset occurred and the permittee has identified the specific cause(s) of the upset, if possible;
 - (2) The permitted facility was at the time being operated in compliance with proper operation and maintenance procedures;
 - (3) The permittee complied with any remedial measures required under Part II.A.2; and
 - (4) The permittee submitted notice of the upset as required in the “Twenty-Four Hour Reporting Requirements,” Part II.C.3, or 327 IAC 2-6.1, whichever is applicable.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal. The discharge of pollutants in treated wastewater is allowed in compliance with the applicable effluent limitations in Part I. of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(10)(F), the permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. In this context, permitted facility refers to a point source discharge, not a wastewater treatment facility. Notice is required only when either of the following applies:

- a. The alteration or addition may meet one of the criteria for determining whether the facility is a new source as defined in 327 IAC 5-1.5.
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in Part I.A, nor to notification requirements in Part II.C.9. of this permit.

Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(9) and 327 IAC 5-2-13 through 15, monitoring results shall be reported at the intervals and in the form specified in "Monitoring Reports", Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(10)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the noncompliance meets the requirements of item b

(Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames.

- a. Any unanticipated bypass which exceeds any effluent limitation in the permit;
- b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances;
- c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit;
- d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants:

Cadmium, Hex. Chromium, T. Chromium, Copper, T. Cyanide, Lead, Nickel, Silver, Zinc, Naphthalene, Tetrachloroethylene, and Total Toxic Organics

The permittee can make the oral reports by calling (317)232-8670 during regular business hours or by calling (317) 233-7745 ((888)233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Alternatively the permittee may submit a "Bypass Fax Report" or a "Noncompliance Notification Report", whichever is appropriate, to IDEM at (317) 232-8637. If a complete fax submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the fax report will satisfy both the oral and written reporting requirements.

4. Other Noncompliance

Pursuant to 327 IAC 5-2-8(10)(D), the permittee shall report any instance of noncompliance not reported under the "Twenty-Four Hour Reporting Requirements" in Part II.C.3, or any compliance schedules at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Part II.C.3.

5. Other Information

Pursuant to 327 IAC 5-2-8(10)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(14):

a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:

- (1) For a corporation: by a responsible corporate officer defined as a president, secretary, treasurer, any vice-president of the corporation in charge of a principal business function, or any other person who performs similar policymaking or decision making functions for the corporation or the manager of one or more manufacturing, production or operating facilities employing more than two hundred fifty (250) persons or having the gross annual sales or expenditures exceeding twenty-five million dollars (\$25,000,000) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- (3) For a Federal, State, or local government body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

b. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above.
- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility.

(A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(3) The authorization is submitted to the Commissioner.

c. Certification. Any person signing a document identified under Part II.C.6. shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(14) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Changes in Discharge of Toxic Substances

Pursuant to 327 IAC 5-2-9, the permittee shall notify the Commissioner as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge of any pollutant identified as toxic, pursuant to

Section 307(a) of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels."

- (1) One hundred micrograms per liter (100µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7).
 - (4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).

- c. That it has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant which was not reported in the permit application under 40 CFR 122.21(g)(9).

Part III
Other Requirements

A. Thermal Effluent Requirements

The combined effect of the effluent from Outfalls 002, 003, and 004 shall comply with the following requirements:

1. There shall be no rise in the temperature in Portage-Burns Waterway of greater than 2°F, as determined from upstream temperature and downstream temperature at the edge of the mixing zone.
2. The downstream temperature in °F at the edge of the mixing zone shall not exceed the maximum limits in Temperature Table 1 below during more than one percent (1%) of the hours in the twelve (12) month period ending with any month; at no time shall the downstream temperature in °F at the edge of the mixing zone exceed the maximum limits in Temperature Table 1 by more than 3°F:

Temperature Table 1

Maximum Instream Water Temperatures				
	Jan	Feb	Mar	Dec
°F	50	50	60	57

3. The number of hours where the downstream temperature at the edge of the mixing zone exceeds the maximum limits in Temperature Table 1 and the number of days where the downstream temperature exceeds the maximum limits in Temperature Table 1 by more than 3° F shall be reported on the state monthly monitoring report and the federal discharge monitoring report.
4. The cumulative number of hours where the downstream temperature at the edge of the mixing zone exceeds the maximum limits in Temperature Table 1 during the most recent twelve (12) month period shall be reported on the state monthly monitoring report and the federal discharge monitoring report every month. The most recent twelve (12) months shall include the current month and the previous eleven (11) months.

5. The downstream temperature in °F at the edge of the mixing zone shall not exceed the maximum limits in Temperature Table 2 below at any time:

Temperature Table 2

Maximum Instream Water Temperatures								
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
°F	65	65	70	70	70	65	65	65

6. The provisions of paragraph 5 above shall be inapplicable at any time when the upstream temperature equals or exceeds the maximum limitation for that day.
7. The mixing zone is the area in Portage-Burns Waterway extending laterally from Outfall 002 to one-half the width of Portage-Burns Waterway and to a distance of 300 feet downstream of Outfall 004.
8. In order to verify compliance with the above thermal limitations, the permittee is required to report the following information as Outfall 500:

<u>Parameter</u>	<u>Monthly Avg.</u>	<u>Daily Max.</u>	<u>Units</u>	<u>Frequency</u>	<u>Sample Type</u>
Upstream River					
Temperature	Report	Report	°F	1 X Hour	[1]
Outfall 002 Effluent	Report	Report	°F	5 X Weekly	Grab
Outfall 003 Effluent	Report	Report	°F	5 X Weekly	Grab
Outfall 004 Effluent	Report	Report	°F	5 X Weekly	Grab
Downstream River Temp[2]	Report	Report	°F	1 X Hour	[1]
Delta T [3]	----	Report	°F	1 X Hour	[4]

- [1] Monitoring and reporting of temperature is to occur on a continuous basis. Temperature measurements shall be recorded continuously in one hour intervals, and the total number of hours above the corresponding maximum limits in Part III.A.2. for the twelve (12) months shall be reported. The twelve months shall include the current month and the previous eleven (11) months. The highest single recorded daily measurement shall be reported on the federal discharge monitoring report as the maximum daily temperature of that month.
- [2] At the edge of the mixing zone approximately 300 feet downstream of Outfall 004. Temperature measurements shall be taken at mid-stream and at a depth of approximately one meter below the water's surface.
- [3] This is the difference between daily maximum upstream and daily maximum downstream (peak) temperature.
- [4] Calculated maximum.

9. The following narrative requirements for temperature apply outside the mixing zone:
 - a. There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
 - b. The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.
10. The permittee has a twenty-four (24) month schedule of compliance to install monitoring equipment to comply with the thermal effluent requirements. During the twenty-four (24) month schedule of compliance, U.S. Steel Midwest will continue to use the current thermal model to calculate the temperature rise from Outfalls 002, 003 and 004 at a frequency of 5 x weekly to determine compliance with Part III.A.1. During this interim period, the permittee will be exempt from reporting hourly downstream river temperature. The permittee must meet the thermal effluent requirements specified in this permit, including the reporting of hourly downstream river temperature within twenty-four (24) months from the effective date of the permit.

The permittee shall submit a progress report to the Compliance Data Section of OWQ no later than twelve (12) months from the effective date of this permit. This report shall include detailed information on the steps the permittee has taken to achieve compliance with the final temperature limitations.

B. Intake Structure

1. BEST TECHNOLOGY AVAILABLE (BTA) EVALUATION

Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326) requires that facilities minimize adverse environmental impact resulting from the operation of cooling water intake structures (CWIS) by using the "best technology available" (BTA). The only applicable federal regulation for implementing Section 316(b) at the Midwest Facility is 40 C.F.R. §125.90(b). This regulation requires that the BTA be determined using Best Professional Judgment (BPJ). The cooling water intake structure(s) operated by the US Steel Corporation at the Midwest Facility has been evaluated under BPJ and utilizing all available information to reach the following BTA determination. A discussion of the BPJ evaluation and a summary of the documentation submitted by US Steel can be found in the Fact Sheet.

At this time IDEM has determined that the existing cooling water intake structure(s) represent best technology available to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326). This determination will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

USS shall at all times properly operate and maintain the cooling water intake structure and associated equipment to minimize adverse environmental impact, consistent with the operational and maintenance practices taken into account in the BTA determination.

As a condition of this BTA determination, the facility must ensure that the through screen velocity for each intake does not exceed 0.5ft/s through either design or operational measures.

2. MONITORING REQUIREMENTS

The purpose of the monitoring studies under this section shall be to further characterize the nature and extent of the environmental impacts, if any, from the CWISs in a scientifically valid manner. Impingement and entrainment have been determined to be appropriate measures for determining whether adverse environmental impacts have been minimized.

a. Entrainment

- (i) Within one year of the effective date of the permit, US Steel Midwest Plant will submit to IDEM a proposal for conducting a two-year entrainment study consistent with this Paragraph a.(i) during the second and third year of the permit term at Pump Station #1. The proposal should be provided to IDEM at least 90 (ninety) days prior to the start of the proposed study.

The proposal should include appropriate sampling periods for the study based upon the expected spawning period for the species of interest. Sampling techniques should be appropriate for the water body and ensure that sufficient data are developed to allow for a scientifically valid estimate of potential entrainment impacts. Appropriate quality assurance/quality control procedures should be utilized.

- (ii) Beginning in year two of the permit's term, US Steel Midwest Plant will conduct the two-year entrainment study

(described above) at the Pump Station #1 in accordance with the proposal submitted to IDEM under (a)(i) above.

- (iii) Results of the entrainment study will be submitted to IDEM as soon after the completion of the study as possible but no later than one year after its completion.
- (iv) Following the initial two-year study described in (a)(i)-(iii) above, US Steel will submit to IDEM every five years thereafter during the permit's effectiveness a proposal for conducting a one-year supplemental entrainment study that takes into account information developed during the prior studies and any material changes at the CWISs. Supplemental studies may be limited to the extent no material changes have occurred at the CWISs. These proposals shall be submitted to IDEM at least 90 (ninety) days prior to the start of the proposed study.
- (v) US Steel will conduct the supplemental entrainment study described in (a)(iv) in accordance with its proposal.
- (vi) Results of the supplemental entrainment study will be submitted to IDEM as soon after the completion of the study as possible but no later than one year after its completion.

b. Impingement

- (i) Within one year of the effective date of the permit, US Steel will submit to IDEM a proposal for conducting a two-year impingement study consistent with this Paragraph b.(i) during the second and third year of the permit term at the Pump Station #1. The proposal should be provided to IDEM at least 90 (ninety) days prior to the start of the proposed study.

The proposal should include appropriate sampling periods for the study based upon the availability of the species of interest to be impinged. Sampling techniques should be appropriate for the water body and ensure that sufficient data are developed to allow for a scientifically valid estimate of potential impingement impacts. Appropriate quality assurance/quality control procedures should be utilized.

- (ii) Beginning in year two of the permit's term, US Steel will conduct the two-year impingement study (described above)

at Pump Station #1 in accordance with the proposal submitted to IDEM under (b)(i) above.

- (iii) Results of the impingement study will be submitted to IDEM as soon after the completion of the study as possible but not later than one year after its completion.
- (iv) Following the initial two-year study described in (b)(i)-(iii) above, US Steel will submit to IDEM every five years thereafter during the permit's effectiveness a proposal for conducting a one year supplemental impingement study that takes into account information developed during the prior years' studies and any material changes at the CWISs. Supplemental studies may be limited to the extent no material changes have occurred at the CWISs. These proposals shall be submitted to IDEM, at least 90 (ninety) days prior to the start of the proposed study.
- (v) US Steel will conduct the supplemental impingement study described in (b)(iv) above in accordance with its proposal.
- (vi) Results of each supplemental study will be submitted to IDEM as soon after the completion of each study as possible but no later than one year after its completion.

3. FISH RETURN EVALUATION

Fish Returns shall be evaluated for all intakes to determine if they minimize fish mortality. US Steel Midwest Plant shall submit to IDEM an evaluation of options (such as keeping the backwash water on after the screens stop to ensure fish return) within one year of the effective date of the permit. This evaluation should include time frames to implement these measures. US Steel will implement any options that IDEM identifies as BTA after the information is available.

4. CHANGES DURING TERM OF PERMIT

US Steel shall provide advance notice to IDEM of any proposed changes to the CWISs or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.

C. Intake Screen Wash

The intake screen backwash goes through the treatment units prior to discharge through Outfall 004.